UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,668	10/17/2005	Herwig Buchholz	MERCK-2686-1	1550

23599 7590 05/21/2009

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.
2200 CLARENDON BLVD.
SUITE 1400
ARLINGTON, VA 22201

EXAMINER	
BLAKELY III, NELSON CLARENCE	
ART UNIT	PAPER NUMBER
1614	

NOTIFICATION DATE	DELIVERY MODE
05/21/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@mwzb.com

Office Action Summary	Application No.	Applicant(s)	
	10/553,668	BUCHHOLZ ET AL.	
	Examiner	Art Unit	
	NELSON C. BLAKELY III	1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,6,7,14,16-18,20-25 and 28-32* is/are pending in the application.

4a) Of the above claim(s) *17,18,20-25 and 28-32* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,6,7,9,14 and 16* is/are rejected.

7)☒ Claim(s) *2,6,7,9,14 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Application Status

Claims 1, 2, 6, 7, 9, 14, 16-18, 20-25 and 28-32 of the instant application are pending. Claims 17, 18, 20-25 and 28-32 are withdrawn pursuant to Applicant's Amendment, filed 04/14/2009. Accordingly, instant claims 1, 2, 6, 7, 9, 14 and 16 are presented for examination on their merits.

Applicant's request for reconsideration of the finality of the rejection of the last Office Action is persuasive and, therefore, the finality of that action is ***withdrawn***.

Applicant's Arguments, filed 04/14/2009, have been fully considered. Rejections not reiterated from previous Office Actions are hereby ***withdrawn***. The following rejections are either reiterated or newly applied. They constitute the complete set of rejections presently being applied to the instant application.

Terminal Disclaimer

The terminal disclaimer, filed on 04/14/2009, disclaiming the terminal portion of any patent granted on this application, which would extend beyond the expiration date of any patent granted on Application No. 10/553,671, has been reviewed and is accepted. The terminal disclaimer has been recorded.

Applicant's Amendment

Applicant's Amendment, filed 04/14/2009, wherein a new Abstract is provided, claims 1, 6, 14 and 16 are amended, and claims 3-5, 8, 10-13, 15, 19, 26, 27, 33 and 34 are canceled, is acknowledged.

Specification

The disclosure is objected to for the following informalities:

A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because a diagonal line on at least pages 5, 9, 99 and 103, for example, renders the specification illegible.

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

The use of the trademarks IRIODIN® and RONASPHERES®, for example, on page 8, lines 27-29, and page 10, line 4, respectively, has been noted in this

application. A trademark should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Appropriate correction is required.

Claim Objections

Claims 2, 6, 7, 9, 14 and 16 are objected to for the following informalities:

With regard to instant claims 2, 6, 7, 9, 14 and 16, Applicant is encouraged to use the term “The” in lieu of “An” at the beginning of the dependent claims, i.e., “The antimicrobial pigment according to…”.

Appropriate correction is required.

Response to Arguments

Applicant's arguments, with respect to claims 1, 2, 6, 7, 9 and 14-16, previously rejected under 35 U.S.C. 103(a), have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, 6, 7, 9, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Senga *et al*. (U.S. Patent No. 6,489,018B2), in view of Bagala, Sr. (U.S. Patent No. 7,045,007B2; Cited in a previous Action), as evidenced by Seo *et al*. (Cosmetics and Toiletries®, Vol. 112, pages 83-90; 1997; Cited by Applicant) and Rick *et al*. (U.S. Patent Application Publication No. 2004/0177788A1).

With regard to instant claims 1, 2, 6, 7, 9, 14 and 16, Senga *et al*. disclose, in column 6, lines 26-59, metallic luster pigments based on synthetic mica as a core material having a lower impurity content and a lower content of iron and other metal ions, which are a coloring factor (instant claim 9), as compared with the metallic luster pigments bases on natural mica. Further, in the instant excerpt, Senga *et al*. disclose that pigments based on synthetic mica have excellent transparency and are highly lustrous and glittering. Even further, in the instant excerpt, Senga *et al*. disclose effective examples of said pigments include pigments which are obtained by coating the surface of a synthetic mica with one or more metal oxides comprising titanium, as the

main component, and iron, comprising a metallic luster of silver, wherein the shape of the mica includes flat shapes, i.e., platelet-shaped (instant claim 2).

Senga *et al*. fail to disclose specifically wherein the pigment comprises silver oxide and is obtainable by agitating at 20-45 ˚C, and wherein the amount of silver oxide is in the range of 0.001 to 10% by weight, based on the inorganic pigment. However, Bagala, Sr. *et al*. disclose, in reference claims 1-8, an effect pigment comprising metal oxide-coated laminar platelets in which the platelets are a mixture of about 5 to 90% platy glass and 90 to 5% platy mica, i.e., synthetic mica (reference column 1, line 50), wherein the metal oxide comprises iron oxide (inorganic colorant or dopant; instant claim 9) and titanium dioxide. In the instant excerpt, Bagala, Sr. *et al*. further disclose wherein the metal oxide coating comprises a plurality of layers, each of which comprises a metal oxide. In column 4, lines 38-52, Bagala, Sr. *et al*. disclose effect pigments constructed with a reflecting layer, i.e., silver, which is overcoated with a low index of refraction material typically having a refractive index from 1.3 to 2.5, which, in turn, may be overcoated with a layer comprising iron and titanium dioxides. Additionally, in Example 45, Bagala, Sr. *et al*. disclose a 100 g mixture of glass flakes and mica stirred, or agitated, at room temperature. In the instant excerpt, Bagala, Sr. *et al*. further disclose wherein 7.87 grams [7.87 g/50 g (half of original mixture) = 0.1574% silver based on the inorganic pigment; instant claim 16] of silver nitrate crystals were added to the slurry, and the mixture was dried at 100 ˚C. Subsequently, tetraethoxysilane (silica source) is added to the slurry and stirred, at room temperature for 7 hours, and the product is washed and oven dried.

Bagala, Sr. *et al*. fail to disclose specifically wherein the antimicrobial pigment is obtainable by agitating at 20-45 ˚C, comprises silver oxide; however, it is not inventive to discover the optimum ranges or regimens by routine experimentation when general conditions of a claim are disclosed in the prior art. See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) and MPEP §2144.05(II). In addition, Applicant recites on page 13, lines 20-25, wherein similar pigments with antimicrobial activity can be obtained by substituting silver oxide by other antimicrobial compounds, such as silver nitrate. Additionally, Applicant recites on page 15, line 6-14, a further embodiment of a method for producing pigments wherein the pigments are further coated with a protective coating layer comprising silica, which is added to the agitated suspension and heated to a temperature between 60 and 90 ˚C. Therefore, the determination of the optimum characterization of the composition and temperatures, as disclosed by Bagala, Sr. *et al*., would have been a matter well within the purview of one of ordinary skill in the art, at the time of the invention, through no more than routine experimentation.

Furthermore, as recited in MPEP 2113, product-by-process claims are not limited to the manipulations of the recited steps, i.e., obtainable by agitating at 20-45 ˚C, only the structure. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claims is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964 (Fed. Cir. 1985).

Senga *et al*. fail to disclose specifically wherein the metallic luster pigments are antimicrobial; however, Seo *et al*. disclose, on page 83, second column, lines 3-9, metals and their compounds showing antimicrobial activity, such as silver.

Senga *et al*. fail to disclose specifically wherein the one or more layers of transparent, semitransparent or opaque, selectively absorbing, nonselectively absorbing or nonabsorbing metal oxides, i.e., TiO_2, are arranged as alternating layers with the refractive index $n > 1.8$ and $n \leq 1.8$, or wherein the maximum deviation for the L value is $-6 \leq \Delta L \leq 6$, and a and b are both $-5 \leq \Delta a/\Delta b \leq 5$. However, it is not inventive to discover the optimum ranges or regimens by routine experimentation when general conditions of a claim are disclosed in the prior art. See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) and MPEP §2144.05(II). In addition, Rick *et al*. disclose, in reference claims 1-4, 9-11 and 13-15, an interference pigment, comprising a flake-form substrate, i.e., synthetic mica, with successive coatings of a colorless coating having a refractive index of $n > 1.8$, a refractive index of $n \leq 1.8$ and an outer protective layer, comprising, for example, titanium dioxide (TiO_2), iron oxide (Fe_2O_3; dopant) and silver oxide (Ag_2O). Furthermore, in Examples 1-4, Rick *et al*. contemplate the values of L, a and b. Therefore, the determination of the optimum characterization of the composition would have been a matter well within the purview of one of ordinary skill in the art, at the time of the invention, through no more than routine experimentation.

Thus, a skilled artisan would have envisaged the instantly claimed antimicrobial pigment, as disclosed by Senga *et al*. and Bagala, Sr. *et al*., and evidenced by Seo *et al*. and Rick *et al*. One of ordinary skill in the art would have been motivated to combine

the teachings of the aforementioned references when seeking an antimicrobial pigment with low impurity content, excellent transparency and one that is visually homogeneous, despite the differences in thickness and refractive index of the platelet layers. It would have been obvious to one of ordinary skill in the art, at the time of the invention, because the combined teachings of the prior art are fairly suggestive of the claimed invention.

Accordingly, the instant invention, as claimed in claims 1, 2, 6, 7, 9, 14 and 16, is *prima facie* obvious over the combination of the aforementioned teachings.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NELSON C. BLAKELY III whose telephone number is (571) 270-3290. The examiner can normally be reached on Mon - Thurs, 7:00 am - 5:30 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin H. Marschel can be reached on (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Phyllis G. Spivack/
Primary Examiner, Art Unit 1614
May 18, 2009

/N. C. B. III/

Examiner, Art Unit 1614